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EXAMINER

STORM, DONALD L

ART UNIT	PAPER NUMBER
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2654

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DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/653,382

Applicant(s)

PECHTER ET AL

Examiner

Donald L. Storm

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title is objected to because it is not sufficiently descriptive of the invention. A new title is required that is clearly indicative of the invention to which the claims are directed. See MPEP § 606.01. The Examiner suggests that the Applicant consider a title including these elements: "Method of Compiling a Speech Rendition of Text from Diphone Sounds."
2. The disclosure is objected to because of potentially confusing informalities.
 - a. At the Abstract, line 14, should the word "waive" be --wav--?
 - b. At the specification, page 10, line 12, should the word "works" be --words--?
3. The abstract is objected to under 37 C. F. R. § 1.72(b) because it exceeds the general guidelines limit of 150 words. The abstract is objected to because the abstract should not refer to purported merits or speculative applications of the invention as in lines 6-10. See MPEP § 608.01(b). Appropriate correction is required.
4. The specification is objected to because it contains (for example, page 7, line 8; page 9, line 6) an impermissible embedded hyperlink(s) and/or other form(s) of browser-executable code. Since PTO policy does not permit the PTO to link to any commercial sites, the present Office practice is to require only nonexecutable text versions of embedded browser-executable code or hyperlinks that could otherwise transfer the user to another web site. Deletion or conversion to nonexecutable text is required throughout the specification. See MPEP 608.01.

Claim Informalities

5. Claim 1, and by dependency claims 2-3, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “each word” (page 28, line 4 and line 7) needs clarification. The number of words available worldwide is so large that it is unlikely that each of them could be compared and played as sound. To further timely prosecution and evaluate prior art, the Examiner has interpreted these phrases to refer to --each word of the plurality--.

6. Claim 3 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “the step of dividing the word” (page 28, line 10) needs clarification. Because a plurality of words and each one of them were previously recited, it may be unclear as to which particular word of the plurality this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --the step of dividing a word--.

7. Claim 3 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “the word” (page 28, line 11) needs clarification. Because a plurality of words and each one of them were previously recited, it may be unclear as to which particular word of the plurality this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --a word--.

8. Claim 4, and by dependency claims 5-6, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “each word” (page 28, line 15) needs clarification. The number of words available worldwide is so large that it is unlikely that each of them could be divided. To further

timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --each word of the plurality--.

9. Claim 4, and by dependency claims 5-6, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “the word” (page 28, line 17) needs clarification. Because a plurality of words and each one of them were previously recited, it may be unclear as to which particular word of the plurality one this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --a word--.

10. Claim 5 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “the word” (page 28, line 18) needs clarification. Because a plurality of words and each one of words were previously recited, it may be unclear as to which particular word of the plurality one this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --a word--.

11. Claim 6 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “the step of dividing the word” (page 28, line 20) needs clarification. Because a plurality of words and each one of them were previously recited, it may be unclear as to which particular word of the plurality one this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase to refer to --the step of dividing each word--.

12. Claim 6 is objected to for the same reasons as claim 5 because the limitations are recited using the same phrase.

13. Regarding claim 1, the Examiner notes without objection that the claim sets forth a sound file corresponding to each word. It seems unlikely that just one sound file would correspond to each of the words and just that particular file would be played. If this is as intended, the Examiner asks that the Applicant indicate a specific part of the specification for understanding this claim element.

14. The form of the claims does not follow Office practice. While there is no set statutory form for claims, the present Office practice is to insist that each claim must be the object of a sentence starting with "I (or we) claim", "The invention claimed is", or the equivalent. The Applicant is encouraged to insert a desired introduction before claim 1. If, at the time of allowance, appropriate terminology is not present, it is inserted by the technical staff. See MPEP § 608.01(m).

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Hutchins

16. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hutchins [US Patent 5,384,893].

17. Regarding claim 4, Hutchins [at abstract] describes a text to speech embodiment recognizable as a whole to one versed in the art by explicitly describing the content and functionality of the recited limitations as the following terminology:

parsing a sentence into words and punctuation [see Fig. 1, items 1005, 1010, 1020, 1030, 1060, 1040, 1050, and their descriptions, especially at columns 5-6 of parsing the grammatical role of an input text string terminating with a space or punctuation mark into parts of the sentence];

dividing the words into diphones [see Fig. 1, items 1010, 1020, 1060, 1070, 1080, 1110, and their descriptions especially at columns 6-7 of translating text character strings into words and converting the string on a diphone-by diphone basis];

combining sound files of the diphones [see Fig. 1, Items 1110, 1120, 1130, and their descriptions especially at columns 7-8 of running together stored diphone waveforms];

playing a sound file of a word [see Fig. 1, items 1020, 1110, 1120, 1130, Speech Output, and their descriptions especially at column 1 and column 8 of D/A conversion to sound of stored diphone waveforms that were converted words and were run together].

18. Regarding claim 5, Hutchins also describes:

adding inflection to the word according to punctuation [see Fig. 1, items 1080, 1090, 1100, 1110, and their descriptions, especially at column 7 and column 18 of interpreting punctuation and converting the string into prosody on a diphone by diphone basis to change the stress, rhythm, and pitch of certain words].

19. Regarding claim 6, Hutchins also describes:

comparing combinations of letters to a database of diphones [see Fig. 1, items 1080, 1090, 1100, 1110, Table IV and their descriptions, especially at column 17 of searching strings of phonetic characters in the diphone inventory].

20. Claim 1 sets forth limitations similar to claim 4. Hutchins describes the limitations as indicated there. Hutchins also describes additional limitations as follows:

comparing the words to a list of prerecorded words [see Fig. 1, items 1010, 1020, Table I, and their descriptions especially at columns 8-9 of searching a word dictionary prepared in advance];

a word that was not found on the list was divided [at column 10, lines 1-22, as a word in the input text not found in the word dictionary is converted into phoneme strings by the OTP process];

the word is converted into diphones [see Fig. 1, items 1010, 1020, 1060, 1070, 1080, 1110, and their descriptions especially at columns 6-7 of translating text character strings into words and converting the string on a diphone-by diphone basis].

21. Claim 2 sets forth additional limitations similar to limitations set forth in claim 5. Hutchins describes the additional limitations as indicated there.

22. Claim 3 sets forth additional limitations similar to limitations set forth in claim 6. Hutchins describes the additional limitations as indicated there.

Conclusion

23. The following references here made of record are considered pertinent to applicant's disclosure:

Cline et al. [US Patent 5,696,879] parses text sentences, converts words into phonemes and diphones, concatenates waveforms for the diphones, and plays them as audio.

Cecys [US Patent 5,704,007] describes concatenative synthesis of speech based on recorded wave data of nonhuman sounds and human speech in sizes including diphones, demi-syllables, and whole words.

Johnson et al. [US Patent 5,787,231] synthesizes speech from words unless a phonetic or audio recording of the word is found in an exception dictionary.

Donovan et al. [US Patent 6,266,637] concatenates recorded speech and synthesized speech from words converted to phoneme sequences by dictionary look-up.

24. Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 872-9306, (for informal or draft communications, and please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA (Sixth Floor, Receptionist)

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is (703) 305-3941. The examiner can normally be reached on weekdays between 8:00 AM and 4:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L. Storm
February 26, 2004

Donald L. Storm
Donald L. Storm
Patent Examiner
Art Unit 2654